

Lecture 8: Currency Union

- Topics:
- 1) European Monetary system background (EMS)
 - 2) European Monetary Union (EMU)
 - 3) Currency boards and dollarizations

1) Background: European Monetary System (EMS): exchange rate bands

After Bretton Woods Break up, several European countries attempt various mechanisms to fix their exchange rates to each other.

In 1979, eight European countries created a formal system of mutually fixed exchange rates, called the European Monetary system (EMS). They fixed their exchange rates relative to each other, floating jointly against the dollar.

The bilateral exchange rates were not held exactly fixed, but were allowed to fluctuate within bands of an assigned par value with each of the other currencies. Called margins. When first set up, each bilateral rate was only allowed to deviate from this by 2.25% above or below.

If the French franc depreciates to its lower limit relative to the DM, it is obligated to sell DM reserves to make Franc appreciate. German central bank is obligated to loan DM to France.

Initially had capital controls that limited the ability of private citizens to trade in foreign currencies. Prevent speculators from starting a currency crisis. These restrictions were relaxed in 1987.

This regime was subject to speculative attacks and currency crises, which almost destroyed the regime in 1992. (We will discuss this historical case later if we have time.)

2) European Monetary Union

a) Introduction

On January 1 2002, 12 European countries finalized their monetary union. This meant that they had a common central bank in Frankfurt in Germany, at which all 12 countries had to agree on a common monetary policy.

Why did these countries take this step. We look below at the various costs and benefits of a monetary union (also called a currency union.)

b. Theory: Gains from monetary union.

Lower uncertainty and transaction costs of cross-border trade

Transaction costs of exchanging currency. Imagine if every time someone bought agricultural products from California, they had to convert to dollars from California pesos.

Uncertainty is even a bigger issue. Example: if electronics store, risky to order shipment of Japanese TVs if not sure what the \$ price will be when they are delivered.

Investment: Even worse for making long-term investment, where payoff is far in future. Not like uncertainty.
(Same as for fixed rates)

Note: size of all these gains depend on extent of trade.

Another issue Is irrevocable.

In EMS, as long as there is some chance E parities can be realigned, invites speculative attacks to undermine the system.

The way to maintain fixed e is by selling reserves of foreign currencies and buying own currency from anyone who wishes to sell it at the official rate. If run out of reserves, must give up and let value of currency fall.

So speculators can make money: borrow bunch of FF, go to central bank and sell for large # DM (FF overvalued), when reserves of DM depleted, bank allows value of FF to fall, then sell back your DM for large number of FF. Repay loan and have profit.

Eliminate this possibility if is only one currency.

c. Theory: Costs of monetary union:

Main cost is cant use independent monetary policy (as with fixed exchange rate regime). But lets see how costly this cost is? - what depends on.

Consider a recession in Spain alone: high unemployment and falling output.

Previously Spain could use its monetary policy: increase money supply to lower interest rates, cheaper to borrow to buy car or build new factories, so stimulate demand for investment projects and consumption. This increased demand causes factories to produce more and hire more workers. So raise GDP and lower unemployment

But now Spain cant do this on own. ECB decides on common monetary policy to suit diverse interests of all the EU 11.

Are some features that determine size of this cost:

1) Symmetry of shocks: If rest of EMU countries all experiencing same shock - fall in tastes for all European goods. In that case, monetary union as a whole could

increase money supply to restore full-employment output. But suppose Spain is the only one. Then stuck. This is a question of how asymmetric the shock is. If it is asymmetric, it hits one country more than others, so would want to use a country-specific policy if could.

Shocks will tend to more symmetric if the national economies are more similar, producing same sorts of things in similar ways.

- 2) Integrated factors markets: If unemployed workers in Spain can move to Denmark if there are more jobs there, then this helps alleviate stress of asymmetric shocks.
- 3) Fiscal Federalism: Also if there is a mechanism whereby if Spain is hurt by a shock, income would be transferred from Denmark to Spain to compensate for lost welfare of higher unemployment. Example would be a federal system of taxation and welfare payments. Collect more taxes from where income is higher and pay more to where income is lower, similar economies.

Seems that costs are low and benefits high if economies are highly integrated: high level of trade in goods, flow of labor, integrated fiscal administration. If these things true, say is an optimal currency area: costs are lower than gains.

d) Evidence We can compare to U.S., which is a functioning common currency area?

- 1) Extent of trade: If trade more, the gains of lower transaction costs will be big.
Most European countries trade 10-20 percent of their GDP with other European countries. This is larger than trade between Europe and the US. But not as large as trade between regions within the US.
However, there is a trend of increasing trade between European.
- 2) Symmetry of Shocks:
Studies have tended to find that shocks are more asymmetric in Europe. Partly due to fact that Northern Europe tends to produce more goods that require capital and skilled labor than do southern European countries.
Right now, Ireland is in boom, and France OK, but Germany on verge of recession.
Output fell last quarter; one more and will be recession.
But can also see some asymmetric shocks in US. Consider Recession in 1990-91. Hit Californian harder and longer than most of rest of country, because was partly due to cutback in defense spending, and many defense contractors were based in California.
- 3) Integration of Labor markets:
Labor mobility is low in Europe, despite fact that have removed passport checks within Europe. Main reason is that countries have distinct cultures, making people less willing to relocate to find employment.
Further, even within each European country there is less mobility than in the US. One study showed that in 1986 3% of US citizens changed state of residency, while in

Germany only 1.1% changed from one German region to another German region;
Italy was 0.6%

Labor mobility is an important means for US regions to adjust to asymmetric shocks.

When California went through bigger recession, there was outflow of migration, say to Oregon and Washington where unemployment was lower.

4) Fiscal Federalism:

Not highly developed in Europe - individual governments have not given up their separate authority over taxing and spending.

Is highly developed fiscal federal system in US - national income tax and welfare system. This transfers much income to areas hit by asymmetric shock. For example, for every dollar California lost in income relative to rest of country, 25 cents less was paid to the federal government, and 10 cents more was received from the federal government. So offset perhaps 35 percent of an asymmetric output shock.

Conclusion: not optimal cur area: costs > benefits. So why move forward?

e) Political benefits of EMU:

1) Joint decision making Non-German countries want: In EMS, Germany is the leader in deciding monetary policy, and other countries are followers. But if have one common central bank deciding monetary policy, Germans will just be one among many members, others will also have a voice in deciding policy.

What then is in it for Germany - why join?

2) Next step toward political Integration: Seen as a necessary step toward political integration, allowing more influence in international affairs. Something Germany has a hard time doing now because of its history.

3) Prevent political opposition to free trade. Are large gains to free trade in goods. If allow fluctuations in exchange rate to hurt export sectors on one country or another, will be an organized political force to demand protectionism and undo free trade in goods. Recall outcry after UK and Italy leave EMS.

Raises question of whether US is really an optimal currency area. Have mechanisms to help deal with asymmetric shocks, like California recession in early 1990s.

But wonder if California would have been better off if had had own currency.

Could have used monetary policy to make California Peso depreciate -- California goods cheaper, improve California CA component of AD, raise California output level toward full employment.

3) Currency Boards and Dollarization:

a) Currency Boards

As a way to prevent currency crises, a number of developing countries have pursued more extreme forms of fixed exchange rate regimes. One example is a currency board. It is related to a monetary union.

Definition: Currency board: government organization, similar to a central bank, that is responsible for maintaining the fixed exchange rate. A notable feature is that it is required to hold sufficient reserves to back 100% of money base in the economy.

The board is prohibited from acquiring any domestic assets (no home bonds). Must hold only foreign reserve assets.

Assets		Liabilities	
Foreign assets	\$1500	Currency in circulation	\$1500
Domestic assets	\$0		

The currency board maintains a fixed exchange rate, as seen before for other regimes, by being willing to execute any trades for domestic currency at official exchange rate. But because the board has full reserve backing, it is impossible to run out of reserves. People could take the whole domestic money supply to the central bank to convert into foreign currency before the currency board would run out of reserves.

This should make the country immune from speculative attacks: you can't break the bank. The hope is that speculators should see this and won't try to launch an attack in the first place.

In most cases of currency boards, there is not even a central bank. The only role of the board is to execute trades automatically that public initiates. Like a vending machine.

Implications:

Officially removes monetary policy from hands of politicians. They implicitly adopt the monetary policy of the other country. They can't increase the money supply without tending to lower the value of currency, and the public will return money supply to the board. If the other country increases its money supply, then the board will find itself buying foreign currency and issuing more home currency. As a result, the country adopting the currency board loses all control over its monetary policy.

According to our theories, this is true for fixed exchange rate regimes of any kind. But it is explicit here. Also the legislation of no home assets in the central bank balance sheet prevents any attempt to sterilize exchange operations and attempt monetary policy. But this may be an advantage, if the foreign country has a better reputation for low money growth and low inflation. Import that reputation.

Another cost: Lose seigniorage revenues (income generated from printing money). Any revenue from seigniorage and the inflation tax goes to the other country, the one that issues the currency.

b) Examples of currency boards

Argentina: was a U.S. dollar currency board 1991-2001. This was seen as a way to fight hyperinflation. Previously when the government declared its intention to cut money growth to decrease inflation, people would not believe it, because of a lack of credibility. So Argentina passed a national law requiring the central bank to keep 100% backing with dollars. Means cannot have money supply growth unless U.S. does. So will have same inflation as U.S.

Estonia and Latvia: when got independence from Soviet Union, these countries had no track record in running a central bank, so they hoped to establish reputations as low inflation countries. Estonia become a DM currency board, Latvia a U.S. dollar currency board. Now both are Euro currency boards.

Hong Kong: inherited status as a British pound currency board from its days as British Colony. It allowed colonial power to run its monetary policy. It switched in 1970s from a pound currency board to the U.S. dollar.

c) Dollarization:

A country can go a step beyond a currency board, and simply adopt the other country's currency as its own national currency.

Unofficial Dollarization:

To some degree, this happens unofficially in many countries, when people concerned that their national currency will lose value because of high inflation choose to hold their wealth in the form of dollars, even though their government has its own distinct official currency.

This can take several stages:

- asset substitution: people hold foreign deposits and bonds as stores of value
- currency substitution: people hold foreign currency notes as a means of payment
- unit of account: domestic goods are priced in terms of the foreign currency, to save on costs of changing domestic currency prices under high rates of inflation.

This practice is widespread: the Federal Reserve estimates that 55-70% of dollar currency notes are held outside the U.S. As much as 10% of the dollars in the world are located in Russia. Also popular in Latin America.

This practice sometimes exists for the DM, as in the Balkans, but it is less popular than the dollar. Perhaps this will change once euro notes are available, especially in Russia. The yen does not seem to be used very much in this way.

Full (official) dollarization:

This occurs when foreign currency has exclusive status as full legal tender. Not only is foreign currency legal for use in contracts between private parties, but the government uses it in payments. If domestic currency exists, it is confined to a secondary role, such as being issued only in coins having small value.

Mainly small countries: Currently there are 29 countries with full dollarization; 15 of these are territories that are not independent, such as the U.S. Virgin Islands. Most of the other countries are extremely small (such as East Timor and Micronesia). The largest dollarized country is Panama.

Works like being a monetary union, but you have no voice in setting of monetary policy. If there is a rise in money demand in the country, the only way to increase money holdings is to decrease spending: if Panama imports \$6 billion worth of goods and assets and sells \$7 billion worth, then Panama has accumulated 1 billion dollars. In other words, to accumulate more dollars, the country needs to run a surplus on its official settlements balance (current account plus private portion of the capital account.)

Dollarizing entails some costs for the dollarizing country

- 1) loose seigniorage from issuing money
- 2) no bank supervision. no central bank to supervise the private banking system.
- 3) no lender of last resort for banks in trouble.
- 4) no independent monetary (as with any fixed exchange rate regime).

Although there is a gain for the U.S. in extra seigniorage it gets, there may also be some costs for the U.S.

- 1) Pressure to alter monetary policy to accommodate the needs of the other country.
- 2) If the country abandons system, they could dump dollars on financial markets.